

## **Appendix A**

### **40 CFR 63 Subpart A Requirements**

## ***Prohibited activities and circumvention***

(a) (1) No owner or operator subject to the provisions of this part must operate any affected source in violation of the requirements of this part. Affected sources subject to and in compliance with either an extension of compliance or an exemption from compliance are not in violation of the requirements of this part. An extension of compliance can be granted by the Administrator under this part; by a State with an approved permit program; or by the President under section 112(i)(4) of the Act.

(2) No owner or operator subject to the provisions of 40 CFR 63 shall fail to keep records, notify, report, or revise reports as required under 40 CFR 63.

(b) Circumvention.

No owner or operator subject to the provisions of 40 CFR 63 shall build, erect, install, or use any article, machine, equipment, or process to conceal an emissions that would otherwise constitute noncompliance with a relevant standard.

Such concealment includes, but is not limited to the following address:

(1) The use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere.

(2) The use of gaseous diluents to achieve compliance with a relevant standard for visible emissions; and

(3)–(5) [Reserved]

(c) Fragmentation. Fragmentation after November 15, 1990 which divides ownership of an operation, within the same facility among various owners where there is no real change in control, will not affect applicability.

The owner and operator must not use fragmentation or phasing of reconstruction activities (i.e., intentionally dividing reconstruction into multiple parts for purposes of avoiding new source requirements) to avoid becoming subject to new source requirements.

**[40 CFR 63.4]**

## ***Operation and maintenance requirements***

(e) **Operation and maintenance requirements.**

(1)(i) At all times, including periods of startup, shutdown, and malfunction, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions to the levels required by the relevant standards, i.e., meet the emission standard or comply with the startup, shutdown, and malfunction plan. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section), review of operation and maintenance records, and inspection of the source.

(ii) Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices.

(iii) Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards.

(2) Reserved

### **(3) Startup, Shutdown, and Malfunction Plan.**

(i) The owner or operator of an affected source must develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; a program of corrective action for malfunctioning process; and air pollution control and monitoring equipment used to comply with the relevant standard. This plan must be developed by the owner or operator by the source's compliance date for that relevant standard. The purpose of the startup, shutdown, and malfunction plan is to--

(A) Ensure that, at all times, the owner or operator operate and maintain affected sources, including associated air pollution control and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions to the levels required by the relevant standards;

(B) Ensure that owners or operators are prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

(C) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

(ii) During periods of startup, shutdown, and malfunction, the owner or operator of an affected source must operate and maintain such source (including associated air pollution control and monitoring equipment) in accordance with the procedures specified in the startup, shutdown, and malfunction plan developed under paragraph (e)(3)(i) of this section.

(iii) When actions taken by the owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for that event. In addition, the owner or operator must keep records of these events as specified in § 63.10(b), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control and monitoring equipment.

(iv) If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds the relevant emission standard, then the owner or operator must record the actions taken for that event and must report such actions within two working days after commencing actions inconsistent with the plan, followed by a letter within two working days after the end of the event, in accordance with § 63.10(d)(5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator).

(v) The owner or operator must maintain at the affected source a current startup, shutdown, and malfunction plan and must make the plan available upon request for inspection and copying by the Administrator. In addition, if the startup, shutdown, and malfunction plan is subsequently revised as provided in paragraph (e)(3)(viii) of this section, the owner or operator must maintain at the affected source each previous (i.e., superseded) version of the startup, shutdown, and malfunction plan, and must make each such previous version available for inspection and copying by the Administrator for a period of five years after revision of the plan. If at any time after adoption of a startup, shutdown, and malfunction plan the affected source ceases operation or is otherwise no longer subject to the provisions of this part, the owner or operator must retain a copy of the most recent plan for five years from the date the source ceases operation or is no longer subject to this part and must make the plan available upon request for inspection and copying by the Administrator.

(vi) To satisfy the requirements of this section to develop a startup, shutdown, and malfunction plan, the owner or operator may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of this section and are made available for inspection when requested by the Administrator.

(vii) Based on the results of a determination made under paragraph (e)(2) of this section, the Administrator may require that an owner or operator of an affected source make changes to the startup, shutdown, and malfunction plan for that source. The Administrator may require reasonable revisions to a startup, shutdown, and malfunction plan, if the Administrator finds that the plan:

(A) Does not address a startup, shutdown, or malfunction event that has occurred;

(B) Fails to provide for the operation of the source (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with safety and good air pollution control practices for minimizing emissions to the levels required by the relevant standards;

(C) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control and monitoring equipment as quickly as practicable; or

(D) Includes an event that does not meet the definition of startup, shutdown, or malfunction listed in § 63.2.

(viii) The owner or operator may periodically revise the startup, shutdown, and malfunction plan for the affected source as necessary to satisfy the requirements of this part or to reflect changes in equipment or procedures at the affected source. Unless the permitting authority provides otherwise, the owner or operator may make such revisions to the startup, shutdown, and malfunction plan without prior approval by the Administrator or the permitting authority. However, each such revision to a startup, shutdown, and malfunction plan must be reported in the semiannual report required by § 63.10(d)(5). If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the owner or operator makes any revision to the startup, shutdown, and malfunction plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the owner or operator has provided a written notice describing the revision to the permitting authority.

(ix) The title V permit for an affected source must require that the owner or operator adopt a startup, shutdown, and malfunction plan which conforms to the provisions of this part, and that the owner or operator operate and maintain the source in accordance with the procedures specified in the current startup, shutdown, and malfunction plan. However, any revisions made to the startup, shutdown, and malfunction plan in accordance with the procedures established by this part shall not be deemed to constitute permit revisions under part 70 or part 71 of this chapter. Moreover, none of the procedures specified by the startup, shutdown, and malfunction plan for an affected source shall be deemed to fall within the permit shield provision in section 504(f) of the Act.

**(f) Compliance with nonopacity emissions standards**

(1) **Applicability.** The non-opacity emission standards set forth in this part shall apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified in an applicable subpart.

If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the non-opacity emission standards set forth in this part, then that emission point must still be required to comply with the non-opacity emission standards and other applicable requirements.

**[40 CFR 63.6(e), (f)(1)]**

#### Performance testing requirements

**(a) Applicability and performance test dates.**

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) If required to do performance testing by a relevant standard, and unless a waiver of performance testing is obtained under this section or the conditions of paragraph (c)(3)(ii)(B) of this section apply, the owner or operator of the affected source must perform such tests within 180 days of the compliance date for such source.

(i) -- (viii) (Reserved).

(ix) When an emissions standard promulgated under 40 CFR 63 is more stringent than the standard proposed [see § 63.6(b)(3)], the owner or operator of a new or reconstructed source subject to that standard for which construction or reconstruction is commenced between the proposal and promulgation dates of the standard shall comply with performance testing requirements within 180 days after the standard's effective date, or within 180 days after startup of the source, whichever is later. If the promulgated standard is more stringent than the proposed standard, the owner or operator may choose to demonstrate compliance with either the proposed or the promulgated standard. If the owner or operator chooses to comply with the proposed standard initially, the owner or operator shall conduct a second performance test within 3 years and 180 days after the effective date of the standard, or after startup of the source, whichever is later, to demonstrate compliance with the promulgated standard.

(3) The Administrator may require an owner or operator to conduct performance tests at the affected source at any other time when the action is authorized by section 114 of the Act.

**[40 CFR 63.7(a)]**

**(b) Notification of performance test.**

(1) The owner or operator of an affected source must notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin to allow the Administrator, upon request, to review and approve the site-specific test plan required under paragraph (c) of this section and to have an observer present during the test.

(2) In the event the owner or operator is unable to conduct the performance test on the date specified in the notification requirement specified in paragraph (b)(1) of this section due to unforeseeable circumstances beyond his or her control, the owner or operator must notify the Administrator as soon as practicable and without delay prior to the scheduled performance test date and specify the date when the performance test is rescheduled.

**[40 CFR 63.7(b)]**

**(c) Quality assurance program.**

(1) The results of the quality assurance program required in this paragraph will be considered by the Administrator when he/she determines the validity of a performance test.

(2)(i) Submission of site-specific test plan. Before conducting a required performance test, the owner or operator of an affected source shall develop and, if requested by the Administrator, shall submit a site-specific test plan to the Administrator for approval. The test plan shall include a test program summary, the test schedule, data quality objectives, and both an internal and external quality assurance (QA) program. Data quality objectives are the pretest expectations of precision, accuracy, and completeness of data.

(ii) The internal QA program shall include, at a minimum, the activities planned by routine operators and analysts to provide an assessment of test data precision; an example of internal QA is the sampling and analysis of replicate samples.

(iii) The external QA program shall include, at a minimum, application of plans for a test method performance audit (PA) during the performance test. The PA's consist of blind audit samples provided by the Administrator and analyzed during the performance test in order to provide a measure of test data bias. The external QA program may also include systems audits that include the opportunity for on-site evaluation by the Administrator of instrument calibration, data validation, sample logging, and documentation of quality control data and field maintenance activities.

(iv) The owner or operator of an affected source shall submit the site-specific test plan to the Administrator upon the Administrator's request at least 60 calendar days before the performance test is scheduled to take place, that is, simultaneously with the notification of intention to conduct a performance test required under paragraph (b) of this section, or on a mutually agreed upon date.

(v) The Administrator may request additional relevant information after the submittal of a site-specific test plan.

**(3) Approval of site-specific test plan.**

(i) The Administrator will notify the owner or operator of approval or intention to deny approval of the site-specific test plan (if review of the site-specific test plan is requested) within 30 calendar days after receipt of the original plan and within 30 calendar days after receipt of any supplementary information that is submitted under paragraph (c)(3)(i)(B) of this section. Before disapproving any site-specific test plan, the Administrator will notify the applicant of the Administrator's intention to disapprove the plan together with –

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present, within 30 calendar days after he/she is notified of the intended disapproval, additional information to the Administrator before final action on the plan.

(ii) In the event that the Administrator fails to approve or disapprove the site-specific test plan within the time period specified in paragraph (c)(3)(i) of this section, the following conditions shall apply:

(A) If the owner or operator intends to demonstrate compliance using the test method(s) specified in the relevant standard or with only minor changes to those tests methods (see paragraph (e)(2)(i) of this section), the owner or operator must conduct the performance test within the time specified in this section using the specified method(s);

(B) If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard, the owner or operator is authorized to conduct the performance test using an alternative test method after the Administrator approves the use of the alternative method when the Administrator approves the site-specific test plan (if review of the site-specific test plan is requested) or after the alternative method is approved (see paragraph (f) of this section). However, the owner or operator is authorized to conduct the performance test using an alternative method in the absence of notification of approval 45 days after submission of the site-specific test plan or request to use an alternative method. The owner or operator is authorized to conduct the performance test within 60 calendar days after he/she is authorized to demonstrate compliance using an alternative test method. Notwithstanding the requirements in the preceding three sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Administrator's prior approval of the site-specific test plan) if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative.

(iii) Neither the submission of a site-specific test plan for approval, nor the Administrator's approval or disapproval of a plan, nor the Administrator's failure to approve or disapprove a plan in a timely manner shall –

(A) Relieve an owner or operator of legal responsibility for compliance with any applicable provisions of 40 CFR 63 or with any other applicable Federal, State, or local requirement; or

(B) Prevent the Administrator from implementing or enforcing 40 CFR 63 or taking any other action under the Act.

(4)(i) Performance test method audit program. The owner or operator must analyze performance audit (PA) samples during each performance test. The owner or operator must request performance audit materials 30 days prior to the test date. Audit materials including cylinder audit gases may be obtained by contacting the appropriate EPA Regional Office or the responsible enforcement authority.

(ii) The Administrator will have sole discretion to require any subsequent remedial actions of the owner or operator based on the PA results.

(iii) If the Administrator fails to provide required PA materials to an owner or operator of an affected source in time to analyze the PA samples during a performance test, the requirement to conduct a PA under this paragraph shall be waived for such source for that performance test. Waiver under this paragraph of the requirement to conduct a PA for a particular performance test does not constitute a waiver of the requirement to conduct a PA for future required performance tests.

**[40 CFR 63.7(c)]**

**(d) Performance testing facilities.**

If required to do performance testing, the owner or operator of each new source and, at the request of the Administrator, the owner or operator of each existing source, shall provide performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such source. This includes:

(i) *Constructing the air pollution control system such that volumetric flow rates and pollutant emissions rates can be accurately determined by applicable test methods and procedures; and*

(ii) Providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures;

(2) Safe sampling platform(s);

(3) Safe access to sampling platform(s);

(4) Utilities for sampling and testing equipment; and

(5) Any other facilities that the Administrator deems necessary for safe and adequate testing of a source.

**[40 CFR 63.7(d)]**

**(e) Conduct of performance tests.**

(1) Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (i.e., performance based on normal operating conditions) of the affected source. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test, nor shall emissions in excess of the level of the relevant standard during periods of startup, shutdown, and malfunction be considered a violation of the relevant standard unless otherwise specified in the relevant standard or a determination of noncompliance is made under § 63.6(e). Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(2) Performance tests shall be conducted and data shall be reduced in accordance with the test methods and procedures set forth in this section, in each relevant standard, and, if required, in applicable appendices of parts 51, 60, 61, and 63 of this chapter unless the Administrator –(i) Specifies or approves, in specific cases, the use of a test method with minor changes in methodology (see definition in § 63.90(a)). Such changes may be approved in conjunction with approval of the site-specific test plan (see paragraph (c) of this section); or

(ii) Approves the use of an intermediate or major change or alternative to a test method (see definitions in § 63.90(a)), the results of which the Administrator has determined to be adequate for indicating whether a specific affected source is in compliance; or

(iii) Approves shorter sampling times or smaller sample volumes when necessitated by process variables or other factors; or

(iv) Waives the requirement for performance tests because the owner or operator of an affected source has demonstrated by other means to the Administrator's satisfaction that the affected source is in compliance with the relevant standard.

(3) Unless otherwise specified in a relevant standard or test method, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the relevant standard. For the purpose of determining compliance with a relevant standard, the arithmetic mean of the results of the three runs shall apply. Upon receiving approval from the Administrator, results of a test run may be replaced with results of an additional test run in the event that –

(i) A sample is accidentally lost after the testing team leaves the site; or

(ii) Conditions occur in which one of the three runs must be discontinued because of forced shutdown; or

(iii) Extreme meteorological conditions occur; or

(iv) Other circumstances occur that are beyond the owner or operator's control.

(4) Nothing in paragraphs (e)(1) through (e)(3) of this section shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

**[40 CFR 63.7(e)]**

**(f) Use of an alternative test method –**

(1) General. Until authorized to use an intermediate or major change or alternative to a test method, the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.

(2) The owner or operator of an affected source required to do performance testing by a relevant standard may use an alternative test method from that specified in the standard provided that the owner or operator –

(i) Notifies the Administrator of his or her intention to use an alternative test method at least 60 days before the performance test is scheduled to begin;

(ii) Uses Method 301 in appendix A of this part to validate the alternative test method. This may include the use of specific procedures of Method 301 if use of such procedures are sufficient to validate the alternative test method; and

(iii) Submits the results of the Method 301 validation process along with the notification of intention and the justification for not using the specified test method. The owner or operator may submit the information required in this paragraph well in advance of the deadline specified in paragraph (f)(2)(i) of this section to ensure a timely review by the Administrator in order to meet the performance test date specified in this section or the relevant standard.



(3) The Administrator will determine whether the owner or operator's validation of the proposed alternative test method is adequate and issue an approval or disapproval of the alternative test method. If the owner or operator intends to demonstrate compliance by using an alternative to any test method specified in the relevant standard, the owner or operator is authorized to conduct the performance test using an alternative test method after the Administrator approves the use of the alternative method. However, the owner or operator is authorized to conduct the performance test using an alternative method in the absence of notification of approval/disapproval 45 days after submission of the request to use an alternative method and the request satisfies the requirements in paragraph (f)(2) of this section. The owner or operator is authorized to conduct the performance test within 60 calendar days after he/she is authorized to demonstrate compliance using an alternative test method. Notwithstanding the requirements in the preceding three sentences, the owner or operator may proceed to conduct the performance test as required in this section (without the Administrator's prior approval of the site-specific test plan) if he/she subsequently chooses to use the specified testing and monitoring methods instead of an alternative.

(4) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative test method for the purposes of demonstrating compliance with a relevant standard, the Administrator may require the use of a test method specified in a relevant standard.

(5) If the owner or operator uses an alternative test method for an affected source during a required performance test, the owner or operator of such source shall continue to use the alternative test method for subsequent performance tests at that affected source until he or she receives approval from the Administrator to use another test method as allowed under § 63.7(f).

(6) Neither the validation and approval process nor the failure to validate an alternative test method shall abrogate the owner or operator's responsibility to comply with the requirements of 40 CFR 63.

**[40 CFR 63.7(f)]**

**(g) Data analysis, recordkeeping, and reporting.**

(1) Unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Administrator in writing, results of a performance test shall include the analysis of samples, determination of emissions, and raw data. A performance test is "completed" when field sample collection is terminated. The owner or operator of an affected source shall report the results of the performance test to the Administrator before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Administrator [see § 63.9(i)]. The results of the performance test shall be submitted as part of the notification of compliance status required under § 63.9(h). Before a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the Administrator. After a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall send the results of the performance test to the appropriate permitting authority.

(2) (Reserved).

(3) For a minimum of 5 years after a performance test is conducted, the owner or operator shall retain and make available, upon request, for inspection by the Administrator the records or results of such performance test and other data needed to determine emissions from an affected source.

**[40 CFR 63.7(g)]**

**(h) Waiver of performance tests.**

(1) Until a waiver of a performance testing requirement has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section.

(2) Individual performance tests may be waived upon written application to the Administrator if, in the Administrator's judgment, the source is meeting the relevant standard(s) on a continuous basis, or the source is being operated under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering that request.

(3) Request to waive a performance test.

(i) If a request is made for an extension of compliance under § 63.6(i), the application for a waiver of an initial performance test shall accompany the information required for the request for an extension of compliance. If no extension of compliance is requested or if the owner or operator has requested an extension of compliance and the Administrator is still considering that request, the application for a waiver of an initial performance test shall be submitted at least 60 days before the performance test if the site-specific test plan under paragraph (c) of this section is not submitted.

(ii) If an application for a waiver of a subsequent performance test is made, the application may accompany any required compliance progress report, compliance status report, or excess emissions and continuous monitoring system performance report [such as those required under § 63.6(i), § 63.9(h), and § 63.10(e) or specified in a relevant standard or in the source's title V permit], but it shall be submitted at least 60 days before the performance test if the site-specific test plan required under paragraph (c) of this section is not submitted.

(iii) Any application for a waiver of a performance test shall include information justifying the owner or operator's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the affected source performing the required test.

(4) Approval of request to waive performance test. The Administrator will approve or deny a request for a waiver of a performance test made under paragraph (h)(3) of this section when he/she –

(i) Approves or denies an extension of compliance under § 63.6(i)(8); or

(ii) Approves or disapproves a site-specific test plan under § 63.7(c)(3); or

(iii) Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

(iv) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

(5) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

**[40 CFR 63.7(h)]**

## ***Monitoring requirements***

**(a) Applicability.**

(1)(i) Unless otherwise specified in a relevant standard, this section applies to the owner or operator of an affected source required to do monitoring under that standard.

(ii) Relevant standards established under 40 CFR 63 will specify monitoring systems, methods, or procedures, monitoring frequency, and other pertinent requirements for source(s) regulated by those standards. This section specifies general monitoring requirements such as those governing the conduct of monitoring and requests to use alternative monitoring methods. In addition, this section specifies detailed requirements that apply to affected sources required to use continuous monitoring systems (CMS) under a relevant standard.

**[40 CFR 63.8(a)]**

**b) Conduct of monitoring.**

(1) Monitoring shall be conducted as set forth in this section and the relevant standard(s) unless the Administrator

(i) Specifies or approves the use of minor changes in methodology for the specified monitoring requirements and procedures (see § 63.90(a) for definition); or

(ii) Approves the use of an intermediate or major change or alternative to any monitoring requirements or procedures (see § 63.90(a) for definition).

(iii) Owners or operators with flares subject to § 63.11(b) are not subject to the requirements of this section unless otherwise specified in the relevant standard.

(2)(i) When the emissions from two or more affected sources are combined before being released to the atmosphere, the owner or operator may install an applicable CMS for each emission stream or for the combined emissions streams, provided the monitoring is sufficient to demonstrate compliance with the relevant standard.

(ii) If the relevant standard is a mass emission standard and the emissions from one affected source are released to the atmosphere through more than one point, the owner or operator must install an applicable MS at each emission point unless the installation of fewer systems is--

(A) Approved by the Administrator; or

(B) Provided for in a relevant standard (e.g., instead of requiring that a CMS be installed at each emissions point before the effluents from those points are channeled to a common control device, the standard specifies that only one CMS is required to be installed at the vent of the control device).

(3) When more than one CMS is used to measure the emissions from one affected source (e.g., multiple breechings, multiple outlets), the owner or operator shall report the results as required for each CMS. However, when one CMS is used as a backup to another CMS, the owner or operator shall report the results from the CMS used to meet the monitoring requirements of 40 CFR 63. If both such CMS are used during a particular reporting period to meet the monitoring requirements of 40 CFR 63, then the owner or operator shall report the results from each CMS for the relevant compliance period.

**[40 CFR 63.8(b)]**

**(c) Operation and maintenance of continuous monitoring systems.**

(1) (i) The owner or operator of an affected source must maintain and operate each CMS as specified in § 63.6(e)(1).

(ii) The owner or operator must keep the necessary parts for routine repairs of the affected CMS equipment readily available.

(iii) The owner or operator of an affected source must develop and implement a written startup, shutdown, and malfunction plan for CMS as specified in § 63.6(e)(3).

(2) (i) All CMS must be installed such that representative measures of emissions or process parameters from the affected source are obtained. In addition, CEMS must be located according to procedures contained in the applicable performance specification(s).

(ii) Unless the individual subpart states otherwise, the owner or operator must ensure the read out (that portion of the CMS that provides a visual display or record), or other indication of operation, from any CMS required for compliance with the emission standard is readily accessible on site for operational control or inspection by the operator of the equipment.

(3) All CMS shall be installed, operational, and the data verified as specified in the relevant standard either prior to or in conjunction with conducting performance tests under §63.7. Verification of operational status shall, at a minimum, include completion of manufacturer written specifications or recommendations for installation, operation, and calibration of the system.

(4) Except for system breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level calibration drift adjustments, all CMS, including COMS and CEMS, shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(i) All COMS shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(ii) All CEMS for measuring emissions other than opacity shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

**[40 CFR 63.8(c)]**

**(a) Quality control program.**

(1) The results of the quality control program required in this paragraph will be considered by the Administrator when he/she determines the validity of monitoring data.

(2) The owner or operator of an affected source that is required to use a CMS and is subject to the monitoring requirements of this section and a relevant standard shall develop and implement a CMS quality control program. As part of the quality control program, the owner or operator shall develop and submit to the Administrator for approval upon request a site-specific performance evaluation test plan for the CMS performance evaluation required in paragraph (e)(3)(i) of this section, according to the procedures specified in paragraph (e). In addition, each quality control program shall include, at a minimum, a written protocol that describes procedures for each of the following operations:

(i) Initial and any subsequent calibration of the CMS;

(ii) Determination and adjustment of the calibration drift of the CMS;

(iii) Preventive maintenance of the CMS, including spare parts inventory;

(iv) Data recording, calculations, and reporting;

(v) Accuracy audit procedures, including sampling and analysis methods; and

(vi) Program of corrective action for a malfunctioning CMS.

(3) The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of 40 CFR 63, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, the owner or operator shall keep previous (i.e., superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. Where relevant, e.g., program of corrective action for a malfunctioning CMS, these written procedures may be incorporated as part of the affected source's startup, shutdown, and malfunction plan to avoid duplication of planning and recordkeeping efforts.

**[40 CFR 63.8(d)]**

**(e) Not applicable.**

**(f) Use of an alternative monitoring method —**

(1) General. Until permission to use an alternative monitoring procedure (minor, intermediate, or major changes; see definition in § 63.90(a)) has been granted by the Administrator under this paragraph (f)(1), the owner or operator of an affected source remains subject to the requirements of this section and the relevant standard.

(2) After receipt and consideration of written application, the Administrator may approve alternatives to any monitoring methods or procedures of 40 CFR 63 including, but not limited to, the following:

- (i) Alternative monitoring requirements when installation of a CMS specified by a relevant standard would not provide accurate measurements due to liquid water or other interferences caused by substances within the effluent gases;
  - (ii) Alternative monitoring requirements when the affected source is infrequently operated;
  - (iii) Alternative monitoring requirements to accommodate CEMS that require additional measurements to correct for stack moisture conditions;
  - (iv) Alternative locations for installing CMS when the owner or operator can demonstrate that installation at alternate locations will enable accurate and representative measurements;
  - (v) Alternate methods for converting pollutant concentration measurements to units of the relevant standard;
  - (vi) Alternate procedures for performing daily checks of zero (low-level) and high-level drift that do not involve use of high-level gases or test cells;
  - (vii) Alternatives to the American Society for Testing and Materials (ASTM) test methods or sampling procedures specified by any relevant standard;
  - (viii) Alternative CMS that do not meet the design or performance requirements in 40 CFR 63, but adequately demonstrate a definite and consistent relationship between their measurements and the measurements of opacity by a system complying with the requirements as specified in the relevant standard. *The Administrator may require that such demonstration be performed for each affected source;*  
or
  - (ix) Alternative monitoring requirements when the effluent from a single affected source or the combined effluent from two or more affected sources is released to the atmosphere through more than one point.
- (3) If the Administrator finds reasonable grounds to dispute the results obtained by an alternative monitoring method, requirement, or procedure, the Administrator may require the use of a method, requirement, or procedure specified in this section or in the relevant standard. *If the results of the specified and alternative method, requirement, or procedure do not agree, the results obtained by the specified method, requirement, or procedure shall prevail.*
- (4)(i) Request to use alternative monitoring procedure. An owner or operator who wishes to use an alternative monitoring procedure must submit an application to the Administrator as described in paragraph (f)(4)(ii) of this section. The application may be submitted at any time provided that the monitoring procedure is not the performance test method used to demonstrate compliance with a relevant standard or other requirement. If the alternative monitoring procedure will serve as the performance test method that is to be used to demonstrate compliance with a relevant standard, the application must be submitted at least 60 days before the performance evaluation is scheduled to begin and must meet the requirements for an alternative test method under § 63.7(f).
- (ii) The application must contain a description of the proposed alternative monitoring system which addresses the four elements contained in the definition of monitoring in § 63.2 and a performance evaluation test plan, if required, as specified in paragraph (e)(3) of this section. In addition, the application must include information justifying the owner or operator's request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required method.
- (iii) The owner or operator may submit the information required in this paragraph well in advance of the submittal dates specified in paragraph (f)(4)(i) above to ensure a timely review by the Administrator in order to meet the compliance demonstration date specified in this section or the relevant standard.
- (iv) Application for minor changes to monitoring procedures, as specified in paragraph (b)(1) of this section, may be made in the site-specific performance evaluation plan.
- (5) Approval of request to use alternative monitoring method.

(i) The Administrator will notify the owner or operator of approval or intention to deny approval of the request to use an alternative monitoring method within 30 calendar days after receipt of the original request and within 30 calendar days after receipt of any supplementary information that is submitted. If a request for a minor change is made in conjunction with site-specific performance evaluation plan, then approval of the plan will constitute approval of the minor change. Before disapproving any request to use an alternative monitoring method, the Administrator will notify the applicant of the Administrator's intention to disapprove the request together with--

(A) Notice of the information and findings on which the intended disapproval is based; and

(B) Notice of opportunity for the owner or operator to present additional information to the Administrator before final action on the request. At the time the Administrator notifies the applicant of his or her intention to disapprove the request, the Administrator will specify how much time the owner or operator will have after being notified of the intended disapproval to submit the additional information.

(ii) The Administrator may establish general procedures and criteria in a relevant standard to accomplish the requirements of paragraph (f)(5)(i) of this section.

(iii) If the Administrator approves the use of an alternative monitoring method for an affected source under paragraph (f)(5)(i) of this section, the owner or operator of such source shall continue to use the alternative monitoring method until he or she receives approval from the Administrator to use another monitoring method as allowed by § 63.8(f).

**[40 CFR 63.8(f)]**

**(g) Reduction of monitoring data.**

(1) The owner or operator of each CMS must reduce the monitoring data as specified in paragraphs (g)(1) through (5) of this section.

(2) Not applicable.

(3) The data may be recorded in reduced or nonreduced form (e.g., ppm pollutant and percent O<sub>2</sub> or ng/J of pollutant).

(4) All emissions data shall be converted into units of the relevant standard for reporting purposes using the conversion procedures specified in that standard. After conversion into units of the relevant standard, the data may be rounded to the same number of significant digits as used in that standard to specify the emissions limit (e.g., rounded to the nearest 1 percent opacity).

(5) Monitoring data recorded during periods of unavoidable CMS breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, and zero (low-level) and high-level adjustments must not be included in any data average computed under this part. For the owner or operator complying with the requirements of § 63.10(b)(2)(vii)(A) or (B), data averages must include any data recorded during periods of monitor breakdown or malfunction.

**[40 CFR 63.8(g)]**

## ***Notification Requirements***

**(a) Applicability and general information.**

(1) The applicability of this section is set out in § 63.1(a)(4).

(2) For affected sources that have been granted an extension of compliance under subpart D of 40 CFR 63, the requirements of this section do not apply to those sources while they are operating under such compliance extensions.

(3) If any State requires a notice that contains all the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification.

(4)(i) Before a State has been delegated the authority to implement and enforce notification requirements established under 40 CFR 63, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the appropriate Regional Office of the EPA (to the attention of the Director of the Division indicated in the list of the EPA Regional Offices in § 63.13).

(ii) After a State has been delegated the authority to implement and enforce notification requirements established under 40 CFR 63, the owner or operator of an affected source in such State subject to such requirements shall submit notifications to the delegated State authority (which may be the same as the permitting authority). In addition, if the delegated (permitting) authority is the State, the owner or operator shall send a copy of each notification submitted to the State to the appropriate Regional Office of the EPA, as specified in paragraph (a)(4)(i) of this section. The Regional Office may waive this requirement for any notifications at its discretion.

**[40 CFR 63.9(a)]**

**(b) Initial notifications.**

(1)(i) The requirements of this paragraph apply to the owner or operator of an affected source when such source becomes subject to a relevant standard.

(ii) If an area source that otherwise would be subject to an emissions standard or other requirement established under 40 CFR 63 if it were a major source subsequently increases its emissions of hazardous air pollutants (or its potential to emit hazardous air pollutants) such that the source is a major source that is subject to the emissions standard or other requirement, such source shall be subject to the notification requirements of this section.

(iii) Affected sources that are required under this paragraph to submit an initial notification may use the application for approval of construction or reconstruction under § 63.5(d) of this subpart, if relevant, to fulfill the initial notification requirements of this paragraph.

(2) The owner or operator of an affected source that has an initial startup before the effective date of a relevant standard under 40 CFR 63 shall notify the Administrator in writing that the source is subject to the relevant standard. The notification, which shall be submitted not later than 120 calendar days after the effective date of the relevant standard (or within 120 calendar days after the source becomes subject to the relevant standard), shall provide the following information:

(i) The name and address of the owner or operator;

(ii) The address (i.e., physical location) of the affected source;

(iii) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;

(iv) A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted; and

(v) A statement of whether the affected source is a major source or an area source.

(3) Reserved

(4) The owner or operator of a new or reconstructed major affected source for which an application for approval of construction or reconstruction is required under § 63.5(d) must provide the following information in writing to the Administrator:

(i) A notification of intention to construct a new major-emitting affected source, reconstruct a major-emitting affected source, or reconstruct a major source such that the source becomes a major-emitting affected source with the application for approval of construction or reconstruction as specified in § 63.5(d)(1)(i); and

(ii) Reserved

(iii) Reserved

(iv) (Reserved).

(v) A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

(5) The owner or operator of a new or reconstructed affected source for which an application for approval of construction or reconstruction is not required under § 63.5(d) must provide the following information in writing to the Administrator:

(i) A notification of intention to construct a new affected source, reconstruct an affected source, or reconstruct a source such that the source becomes an affected source, and

(ii) A notification of the actual date of startup of the source, delivered or postmarked within 15 calendar days after that date.

(iii) Unless the owner or operator has requested and received prior permission from the Administrator to submit less than the information in § 63.5(d), the notification must include the information required on the application for approval of construction or reconstruction as specified in § 63.5(d)(1)(I).

**[40 CFR 63.9(b)]**

**(c) Request for extension of compliance.**

If the owner or operator of an affected source cannot comply with a relevant standard by the applicable compliance date for that source, or if the owner or operator has installed BACT or technology to meet LAER consistent with § 63.6(i)(5) of this subpart, he/she may submit to the Administrator (or the State with an approved permit program) a request for an extension of compliance as specified in § 63.6(i)(4) through § 63.6(i)(6).

**[40 CFR 63.9(c)]**

**(d) Notification that source is subject to special compliance requirements.**

An owner or operator of a new source that is subject to special compliance requirements as specified in § 63.6(b)(3) and § 63.6(b)(4) shall notify the Administrator of his/her compliance obligations not later than the notification dates established in paragraph (b) of this section for new sources that are not subject to the special provisions.

**[40 CFR 63.9(d)]**

**(e) Notification of performance test.**

The owner or operator of an affected source shall notify the Administrator in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin to allow the Administrator to review and approve the site-specific test plan required under § 63.7(c), if requested by the Administrator, and to have an observer present during the test.

**[40 CFR 63.9(e)]**

(f) Not applicable.

(g) Not applicable

**(h) Notification of compliance status.**

(1) The requirements of paragraphs (h)(2) through (h)(4) of this section apply when an affected source becomes subject to a relevant standard.

(2) Only applicable prior to issuance of a Title V permit.



(3) After a title V permit has been issued to the owner or operator of an affected source, the owner or operator of such source shall comply with all requirements for compliance status reports contained in the source's title V permit, including reports required under 40 CFR 63. After a title V permit has been issued to the owner or operator of an affected source, and each time a notification of compliance status is required under 40 CFR 63, the owner or operator of such source shall submit the notification of compliance status to the appropriate permitting authority following completion of the relevant compliance demonstration activity specified in the relevant standard.

(4) (Reserved).

(5) If an owner or operator of an affected source submits estimates or preliminary information in the application for approval of construction or reconstruction required in § 63.5(d) in place of the actual emissions data or control efficiencies required in paragraphs (d)(1)(ii)(H) and (d)(2) of § 63.5, the owner or operator shall submit the actual emissions data and other correct information as soon as available but no later than with the initial notification of compliance status required in this section.

(6) Advice on a notification of compliance status may be obtained from the Administrator.

**[40 CFR 63.9(h)]**

**(i) Adjustment to time periods or postmark deadlines for submittal and review of required communications.**

(1)(i) Until an adjustment of a time period or postmark deadline has been approved by the Administrator under paragraphs (i)(2) and (i)(3) of this section, the owner or operator of an affected source remains strictly subject to the requirements of 40 CFR 63.

(ii) An owner or operator shall request the adjustment provided for in paragraphs (i)(2) and (i)(3) of this section each time he or she wishes to change an applicable time period or postmark deadline specified in 40 CFR 63.

(2) Notwithstanding time periods or postmark deadlines specified in 40 CFR 63 for the submittal of information to the Administrator by an owner or operator, or the review of such information by the Administrator, such time periods or deadlines may be changed by mutual agreement between the owner or operator and the Administrator. An owner or operator who wishes to request a change in a time period or postmark deadline for a particular requirement shall request the adjustment in writing as soon as practicable before the subject activity is required to take place. The owner or operator shall include in the request whatever information he or she considers useful to convince the Administrator that an adjustment is warranted.

(3) If, in the Administrator's judgment, an owner or operator's request for an adjustment to a particular time period or postmark deadline is warranted, the Administrator will approve the adjustment. The Administrator will notify the owner or operator in writing of approval or disapproval of the request for an adjustment within 15 calendar days of receiving sufficient information to evaluate the request.

(4) If the Administrator is unable to meet a specified deadline, he or she will notify the owner or operator of any significant delay and inform the owner or operator of the amended schedule.

**[40 CFR 63.9(i)]**

**(j) Change in information already provided.**

Any change in the information already provided under this section shall be provided to the Administrator in writing within 15 calendar days after the change.

**[40 CFR 63.9(j)]**

## **Recordkeeping and Reporting Requirements**

**(a) Applicability and general information.**

(1) The applicability of this section is set out in § 63.1(a)(4).

- (2) For affected sources that have been granted an extension of compliance under subpart D of 40 CFR 63, the requirements of this section do not apply to those sources while they are operating under such compliance extensions.
- (3) If any State requires a report that contains all the information required in a report listed in this section, an owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section for that report.
- (4)(i) Before a State has been delegated the authority to implement and enforce recordkeeping and reporting requirements established under 40 CFR 63, the owner or operator of an affected source in such State subject to such requirements shall submit reports to the appropriate Regional Office of the EPA (to the attention of the Director of the Division indicated in the list of the EPA Regional Offices in § 63.13).
- (ii) After a State has been delegated the authority to implement and enforce recordkeeping and reporting requirements established under 40 CFR 63, the owner or operator of an affected source in such State subject to such requirements shall submit reports to the delegated State authority (which may be the same as the permitting authority). In addition, if the delegated (permitting) authority is the State, the owner or operator shall send a copy of each report submitted to the State to the appropriate Regional Office of the EPA, as specified in paragraph (a)(4)(i) of this section. The Regional Office may waive this requirement for any reports at its discretion.
- (5) If an owner or operator of an affected source in a State with delegated authority is required to submit periodic reports under 40 CFR 63 to the State, and if the State has an established timeline for the submission of periodic reports that is consistent with the reporting frequency(ies) specified for such source under 40 CFR 63, the owner or operator may change the dates by which periodic reports under 40 CFR 63 shall be submitted (without changing the frequency of reporting) to be consistent with the State's schedule by mutual agreement between the owner or operator and the State. For each relevant standard established pursuant to section 112 of the Act, the allowance in the previous sentence applies in each State beginning one year after the affected source's compliance date for that standard. Procedures governing the implementation of this provision are specified in § 63.9(i).
- (6) If an owner or operator supervises one or more stationary sources affected by more than one standard established pursuant to section 112 of the Act, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State permitting authority) a common schedule on which periodic reports required for each source shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning one year after the latest compliance date for any relevant standard established pursuant to section 112 of the Act for any such affected source(s). Procedures governing the implementation of this provision are specified in § 63.9(i).
- (7) If an owner or operator supervises one or more stationary sources affected by standards established pursuant to section 112 of the Act (as amended November 15, 1990) and standards set under part 60, part 61, or both such parts of this chapter, he/she may arrange by mutual agreement between the owner or operator and the Administrator (or the State permitting authority) a common schedule on which periodic reports required by each relevant (i.e., applicable) standard shall be submitted throughout the year. The allowance in the previous sentence applies in each State beginning one year after the stationary source is required to be in compliance with the relevant section 112 standard, or one year after the stationary source is required to be in compliance with the applicable part 60 or part 61 standard, whichever is latest. Procedures governing the implementation of this provision are specified in § 63.9(i).

**[40 CFR 63.10(a)]**

**(b) General recordkeeping requirements.**

(1) The owner or operator of an affected source subject to the provisions of 40 CFR 63 shall maintain files of all information (including all reports and notifications) required by 40 CFR 63 recorded in a form suitable and readily available for expeditious inspection and review. The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained onsite. The remaining three years of data may be retained off site. Such files may be maintained on microfilm, on a computer, on computer floppy disks, on magnetic tape disks, or on microfiche.

(2) The owner or operator of an affected source subject to the provisions of 40 CFR 63 shall maintain relevant records for such source of –

(i) The occurrence and duration of each startup, shutdown, or malfunction of operation (i.e., process equipment);

(ii) The occurrence and duration of each malfunction of the required air pollution control and monitoring equipment;

(iii) All required maintenance performed on the air pollution control and monitoring equipment;

(iv) Actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) when such actions are different from the procedures specified in the affected source's startup, shutdown, and malfunction plan (see § 63.6(e)(3));

(v) All information necessary to demonstrate conformance with the affected source's startup, shutdown, and malfunction plan (see § 63.6(e)(3)) when all actions taken during periods of startup, shutdown, and malfunction (including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation) are consistent with the procedures specified in such plan. (The information needed to demonstrate conformance with the startup, shutdown, and malfunction plan may be recorded using a "checklist," or some other effective form of recordkeeping, in order to minimize the recordkeeping burden for conforming events);

(vi) Each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);

(vii) All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);

(A) This paragraph applies to owners or operators required to install a continuous emissions monitoring system (CEMS) where the CEMS installed is automated, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. An automated CEMS records and reduces the measured data to the form of the pollutant emissions standard through the use of a computerized data acquisition system. In lieu of maintaining a file of all CEMS sub hourly measurements as required under paragraph (b)(2)(vii) of this section, the owner or operator shall retain the most recent consecutive three averaging periods of sub hourly measurements and a file that contains a hard copy of the data acquisition system algorithm used to reduce the measured data into the reportable form of the standard.

(B) This paragraph applies to owners or operators required to install a CEMS where the measured data is manually reduced to obtain the reportable form of the standard, and where the calculated data averages do not exclude periods of CEMS breakdown or malfunction. In lieu of maintaining a file of all CEMS sub hourly measurements as required under paragraph (b)(2)(vii) of this section, the owner or operator shall retain all sub hourly measurements for the most recent reporting period. The sub hourly measurements shall be retained for 120 days from the date of the most recent summary or excess emissions report submitted to the Administrator.

(C) The Administrator or delegated authority, upon notification to the source, may require the owner or operator to maintain all measurements as required by paragraph (b)(2)(vii), if the administrator or the delegated authority determines these records are required to more accurately assess the compliance status of the affected source.

(viii) All results of performance tests, CMS performance evaluations, and opacity and visible emissions observations;

(ix) All measurements as may be necessary to determine the conditions of performance tests and performance evaluations;

(x) All CMS calibration checks;

(xi) All adjustments and maintenance performed on CMS;

(xii) Any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements under 40 CFR 63, if the source has been granted a waiver under paragraph (f) of this section;

(xiii) All emissions levels relative to the criterion for obtaining permission to use an alternative to the relative accuracy test, if the source has been granted such permission under § 63.8(f)(6); and

(xiv) All documentation supporting initial notifications and notifications of compliance status under § 63.9.

(3) Recordkeeping requirement for applicability determinations. If an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f), and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under this part) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of five years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the Administrator to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of this part for this purpose for particular categories of stationary sources. If relevant, the analysis should be performed in accordance with EPA guidance materials published to assist sources in making applicability determinations under section 112, if any. The requirements to determine applicability of a standard under § 63.1(b)(3) and to record the results of that determination under paragraph (b)(3) of this section shall not by themselves create an obligation for the owner or operator to obtain a title V permit.

**[40 CFR 63.10(b)]**

(c) Additional recordkeeping requirements for sources with continuous monitoring systems  
In addition to complying with the requirements specified in paragraphs (b)(1) and (b)(2) of this section, the owner or operator of an affected source required to install a CMS by a relevant standard shall maintain records for such source of –

(1) All required CMS measurements (including monitoring data recorded during unavoidable CMS breakdowns and out-of-control periods);

(2) - (4) (Reserved).

(5) The date and time identifying each period during which the CMS was inoperative except for zero (low-level) and high-level checks;

(6) Not applicable.

(7) The specific identification (i.e., the date and time of commencement and completion) of each period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during startups, shutdowns, and malfunctions of the affected source;

(8) The specific identification (i.e., the date and time of commencement and completion) of each time period of excess emissions and parameter monitoring exceedances, as defined in the relevant standard(s), that occurs during periods other than startups, shutdowns, and malfunctions of the affected source;

(9) (Reserved).

(10) The nature and cause of any malfunction (if known);

(11) The corrective action taken or preventive measures adopted;

(12) The nature of the repairs or adjustments to the CMS that was inoperative or out of control;

(13) The total process operating time during the reporting period

(14) Not applicable.

(15) In order to satisfy the requirements of paragraphs (c)(10) through (c)(12) of this section and to avoid duplicative recordkeeping efforts, the owner or operator may use the affected source's startup, shutdown, and malfunction plan or records kept to satisfy the recordkeeping requirements of the startup, shutdown, and malfunction plan specified in § 63.6(e), provided that such plan and records adequately address the requirements of paragraphs (c)(10) through (c)(12).

**[40 CFR 63.10(c)]**

**(d) General reporting requirements.**

(1) Notwithstanding the requirements in this paragraph or paragraph (e) of this section, the owner or operator of an affected source subject to reporting requirements under 40 CFR 63 shall submit reports to the Administrator in accordance with the reporting requirements in the relevant standard(s).

(2) Reporting results of performance tests. Before a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of any performance test under § 63.7 to the Administrator. After a title V permit has been issued to the owner or operator of an affected source, the owner or operator shall report the results of a required performance test to the appropriate permitting authority. The owner or operator of an affected source shall report the results of the performance test to the Administrator (or the State with an approved permit program) before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise in writing by the Administrator. The results of the performance test shall be submitted as part of the notification of compliance status required under § 63.9(h).

(3) Not applicable.

(4) Progress reports. The owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under § 63.6(i) shall submit such reports to the Administrator (or the State with an approved permit program) by the dates specified in the written extension of compliance.

(5)(i) Periodic startup, shutdown, and malfunction reports. If actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan [see § 63.6(e)(3)], the owner or operator shall state such information in a startup, shutdown, and malfunction report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period, and they must include the number, duration, and a brief description of each startup, shutdown, or malfunction. The startup, shutdown, and malfunction report shall consist of

a letter, containing the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, that shall be submitted to the Administrator semiannually (or on a more frequent basis if specified otherwise in a relevant standard or as established otherwise by the permitting authority in the source's title V permit). The startup, shutdown, and malfunction report shall be delivered or postmarked by the 30th day following the end of each calendar half (or other calendar reporting period, as appropriate). If the owner or operator is required to submit excess emissions and continuous monitoring system performance (or other periodic) reports under 40 CFR 63, the startup, shutdown, and malfunction reports required under this paragraph may be submitted simultaneously with the excess emissions and continuous monitoring system performance (or other) reports. If startup, shutdown, and malfunction reports are submitted with excess emissions and continuous monitoring system performance (or other periodic) reports, and the owner or operator receives approval to reduce the frequency of reporting for the latter under paragraph (e) of this section, the frequency of reporting for the startup, shutdown, and malfunction reports also may be reduced if the Administrator does not object to the intended change. The procedures to implement the allowance in the preceding sentence shall be the same as the procedures specified in paragraph (e)(3) of this section.

(ii) Immediate startup, shutdown, and malfunction reports. Notwithstanding the allowance to reduce the frequency of reporting for periodic startup, shutdown, and malfunction reports under paragraph (d)(5)(i) of this section, any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator shall report the actions taken for that event within two working days after commencing actions inconsistent with the plan followed by a letter within seven working days after the end of the event. The immediate report required under this paragraph shall consist of a telephone call (or facsimile [FAX] transmission) to the Administrator within two working days after commencing actions inconsistent with the plan, and it shall be followed by a letter, delivered or postmarked within seven working days after the end of the event, that contains the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred. Notwithstanding the requirements of the previous sentence, after the effective date of an approved permit program in the State in which an affected source is located, the owner or operator may make alternative reporting arrangements, in advance, with the permitting authority in that State. Procedures governing the arrangement of alternative reporting requirements under this paragraph are specified in § 63.9(i).

**[40 CFR 63.10(d)]**

(e) (1)(2) Not applicable.

(3) Excess emissions and continuous monitoring system performance report and summary report.

(i) Excess emissions and parameter monitoring exceedances are defined in relevant standards. The owner or operator of an affected source required to install a CMS by a relevant standard shall submit an excess emissions and continuous monitoring system performance report and/or a summary report to the Administrator semiannually, except when –

(A) More frequent reporting is specifically required by a relevant standard;

(B) The Administrator determines on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the source; or

(C) (Reserved).

(ii) Request to reduce frequency of excess emissions and continuous monitoring system performance reports. Notwithstanding the frequency of reporting requirements specified in paragraph (e)(3)(i) of this section, an owner or operator who is required by a relevant standard to submit excess emissions and continuous monitoring system performance (and summary) reports on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(A) For 1 full year (e.g., four quarterly or 12 monthly reporting periods) the affected source's excess emissions and continuous monitoring system performance reports continually demonstrate that the source is in compliance with the relevant standard;

(B) The owner or operator continues to comply with all recordkeeping and monitoring requirements specified in this subpart and the relevant standard; and

(C) The Administrator does not object to a reduced frequency of reporting for the affected source, as provided in paragraph (e)(3)(iii) of this section.

(iii) The frequency of reporting of excess emissions and continuous monitoring system performance (and summary) reports required to comply with a relevant standard may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the five-year recordkeeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(iv) As soon as CMS data indicate that the source is not in compliance with any emissions limitation or operating parameter specified in the relevant standard, the frequency of reporting shall revert to the frequency specified in the relevant standard, and the owner or operator shall submit an excess emissions and continuous monitoring system performance (and summary) report for the noncomplying emissions points at the next appropriate reporting period following the noncomplying event. After demonstrating ongoing compliance with the relevant standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard, as provided for in paragraphs (e)(3)(ii) and (e)(3)(iii) of this section.

(v) Content and submittal dates for excess emissions and monitoring system performance reports. All excess emissions and monitoring system performance reports and all summary reports, if required, shall be delivered or postmarked by the 30th day following the end of each calendar half or quarter, as appropriate. Written reports of excess emissions or exceedances of process or control system parameters shall include all the information required in paragraphs (c)(5) through (c)(13) of this section, in § 63.8(c)(7) and § 63.8(c)(8), and in the relevant standard, and they shall contain the name, title, and signature of the responsible official who is certifying the accuracy of the report. When no excess emissions or exceedances of a parameter have occurred, or a CMS has not been inoperative, out of control, repaired, or adjusted, such information shall be stated in the report.

(vi) Summary report. As required under paragraphs (e)(3)(vii) and (e)(3)(viii) of this section, one summary report shall be submitted for the hazardous air pollutants monitored at each affected source (unless the relevant standard specifies that more than one summary report is required, e.g., one summary report for each hazardous air pollutant monitored). The summary report shall be entitled "Summary Report -- Gaseous and Opacity Excess Emission and Continuous Monitoring System Performance" and shall contain the following information:

- (A) The company name and address of the affected source;
- (B) An identification of each hazardous air pollutant monitored at the affected source;
- (C) The beginning and ending dates of the reporting period;
- (D) A brief description of the process units;
- (E) The emissions and operating parameter limitations specified in the relevant standard(s);
- (F) The monitoring equipment manufacturer(s) and model number(s);
- (G) The date of the latest CMS certification or audit;
- (H) The total operating time of the affected source during the reporting period;
- (I) An emissions data summary (or similar summary if the owner or operator monitors control system parameters), including the total duration of excess emissions during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of excess emissions expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total duration of excess emissions during the reporting period into those that are due to startup/shutdown, control equipment problems, process problems, other known causes, and other unknown causes;
- (J) A CMS performance summary (or similar summary if the owner or operator monitors control system parameters), including the total CMS downtime during the reporting period (recorded in minutes for opacity and hours for gases), the total duration of CMS downtime expressed as a percent of the total source operating time during that reporting period, and a breakdown of the total CMS downtime during the reporting period into periods that are due to monitoring equipment malfunctions, nonmonitoring equipment malfunctions, quality assurance/quality control calibrations, other known causes, and other unknown causes;
- (K) A description of any changes in CMS, processes, or controls since the last reporting period;
- (L) The name, title, and signature of the responsible official who is certifying the accuracy of the report; and
- (M) The date of the report.

(vii) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is less than 1% of the total operating time for the reporting period, and CMS downtime for the reporting period is less than 5% of the total operating time for the reporting period, only the summary report shall be submitted, and the full excess emissions and continuous monitoring system performance report need not be submitted unless required by the Administrator.

(viii) If the total duration of excess emissions or process or control system parameter exceedances for the reporting period is 1% or greater of the total operating time for the reporting period, or the total CMS downtime for the reporting period is 5% or greater of the total operating time for the reporting period, both the summary report and the excess emissions and continuous monitoring system performance report shall be submitted.

**[40 CFR 63.10(e)]**



**(f) Waiver of recordkeeping or reporting requirements.**

(1) Until a waiver of a recordkeeping or reporting requirement has been granted by the Administrator under this paragraph, the owner or operator of an affected source remains subject to the requirements of this section.

(2) Recordkeeping or reporting requirements may be waived upon written application to the Administrator if, in the Administrator's judgment, the affected source is achieving the relevant standard(s), or the source is operating under an extension of compliance, or the owner or operator has requested an extension of compliance and the Administrator is still considering that request.

(3) If an application for a waiver of recordkeeping or reporting is made, the application shall accompany the request for an extension of compliance under § 63.6(i), any required compliance progress report or compliance status report required under 40 CFR 63 [such as under § 63.6(i) and § 63.9(h)] or in the source's title V permit, or an excess emissions and continuous monitoring system performance report required under paragraph (e) of this section, whichever is applicable. The application shall include whatever information the owner or operator considers useful to convince the Administrator that a waiver of recordkeeping or reporting is warranted.

(4) The Administrator will approve or deny a request for a waiver of recordkeeping or reporting requirements under this paragraph when he/she –

(i) Approves or denies an extension of compliance; or

(ii) Makes a determination of compliance following the submission of a required compliance status report or excess emissions and continuous monitoring systems performance report; or

(iii) Makes a determination of suitable progress towards compliance following the submission of a compliance progress report, whichever is applicable.

(5) A waiver of any recordkeeping or reporting requirement granted under this paragraph may be conditioned on other recordkeeping or reporting requirements deemed necessary by the Administrator.

(6) Approval of any waiver granted under this section shall not abrogate the Administrator's authority under the Act or in any way prohibit the Administrator from later canceling the waiver. The cancellation will be made only after notice is given to the owner or operator of the affected source.

**[40 CFR 63.10(f)]**

**Addresses of State air pollution control agencies and EPA Regional Offices.**

(a) All requests, reports, applications, submittals, and other communications to the Administrator pursuant to 40 CFR 63 shall be submitted to the appropriate Regional Office of the U.S. Environmental Protection Agency EPA Region X (Alaska, Idaho, Oregon, Washington), Director, Office of Air Quality, 1200 Sixth Avenue (OAQ-107), Seattle, WA 98101.

**[40 CFR 63.13(a)]**

(b) All information required to be submitted to the Administrator under 40 CFR 63 also shall be submitted to the appropriate State agency of any State to which authority has been delegated under section 112(l) of the Act. The owner or operator of an affected source may contact the appropriate EPA Regional Office for the mailing addresses for those States whose delegation requests have been approved.

**[40 CFR 63.13(b)]**

(c) If any State requires a submittal that contains all the information required in an application, notification, request, report, statement, or other communication required in 40 CFR 63, an owner or operator may send the appropriate Regional Office of the EPA a copy of that submittal to satisfy the requirements of 40 CFR 63 for that communication.

**[40 CFR 63.13(c)]**

## **Incorporation by Reference**

(a) The materials listed in this section are incorporated by reference in the corresponding sections noted. These incorporations by reference were approved by the Director of the Federal Register in accordance with five U.S.C. 552(a) and 1 CFR Part 51. These materials are incorporated as they exist on the date of the approval, and notice of any change in these materials will be published in the Federal Register. The materials are available for purchase at the corresponding addresses noted below.

**[40 CFR 63.14(a)]**

(b),(c),(d),(e),(f) Not applicable.

(g) The materials listed below are available for purchase from AOAC International, Customer Services, Suite 400, 2200 Wilson Boulevard, Arlington, Virginia, 22201-3301, Telephone (703)522-3032, Fax (703)522-5468.

(1) AOAC Official Method 978.01 Phosphorus (Total) in Fertilizers, Automated Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(2) AOAC Official Method 969.02 Phosphorus (Total) in Fertilizers, Alkalimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(3) AOAC Official Method 962.02 Phosphorus (Total) in Fertilizers, Gravimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(4) AOAC Official Method 957.02 Phosphorus (Total) in Fertilizers, Preparation of Sample Solution, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(5) AOAC Official Method 929.01 Sampling of Solid Fertilizers, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(6) AOAC Official Method 929.02 Preparation of Fertilizer Sample, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(7) AOAC Official Method 958.01 Phosphorus (Total) in Fertilizers, Spectrophotometric Molybdovanadophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

**[40 CFR 63.14(g)]**

(h) The materials listed below are available for purchase from The Association of Florida Phosphate Chemists, P.O. Box 1645, Bartow, Florida, 33830, Book of Methods Used and Adopted By The Association of Florida Phosphate Chemists, Seventh Edition 1991, IBR.

(1) Section IX, Methods of Analysis for Phosphate Rock, No. 1 Preparation of Sample, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(2) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus -- P(2)O(5) or Ca(3)(PO(4))(2), Method A-Volumetric Method, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(3) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus-P(2)O(5) or Ca(3)(PO(4))(2), Method B -- Gravimetric Quimociac Method, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(4) Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus-P(2)O(5) or Ca(3)(PO(4))(2), Method C -- Spectrophotometric Method, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(5) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P(2)O(5), Method A -- Volumetric Method, IBR approved for § 63.606(c)(3)(ii), § 63.626(c)(3)(ii), and § 63.626(d)(3)(v).

(6) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P(2)O(5), Method B -- Gravimetric Quimociac Method, IBR approved for § 63.606(c)(3)(ii), § 63.626(c)(3)(ii), and § 63.626(d)(3)(v).

(7) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P(2)O(5), Method C -- Spectrophotometric Method, IBR approved for § 63.606(c)(3)(ii), § 63.626(c)(3)(ii), and § 63.626(d)(3)(v).

**[40 CFR 63.14(h)]**

## **Appendix B**

### **40 CFR 60 Subpart A Requirements**

## **B.1 Address**

(a) All requests, reports, applications, submittals, and other communications to the Administrator pursuant to 40 CFR 60 shall be submitted in duplicate to the appropriate Regional Office of the U.S. Environmental Protection Agency to the attention of the Director of the Division indicated in the following list of EPA Regional Offices. Region X (Alaska, Oregon, Idaho, Washington), Director, Air and Waste Management Division, U.S. Environmental Protection Agency, 1200 Sixth Avenue, Seattle, Washington 98101.

(b) Section 111(c) of the Clean Air Act directs the Administrator to delegate to each State, when appropriate, the authority to implement and enforce standards of performance for new stationary sources located in such State. All information required to be submitted to EPA under paragraph (a) of this section, must also be submitted to the appropriate State Agency of any State to which this authority has been delegated (provided, that each specific delegation may except sources from a certain Federal or State reporting requirement).

**[40 CFR 60.4]**

## **B.2 Notification and Recordkeeping**

(a) Any owner or operator subject to the provisions of 40 CFR 60 shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:

(1) A notification of the date construction (or reconstruction as defined under § 60.15) of an affected facility is commenced postmarked no later than 30 days after such date. This requirement shall not apply in the case of mass-produced facilities which are purchased in completed form.

(2) (Reserved).

(3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

(4) A notification of any physical or operational change to an existing facility which may increase the emissions rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in § 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emissions control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

(6) A notification of the anticipated date for conducting the opacity observations required by § 60.11(e)(1) of 40 CFR 60. The notification shall also include, if appropriate, a request for the Administrator to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date.

(b) Any owner or operator subject to the provisions of 40 CFR 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

(f) Any owner or operator subject to the provisions of 40 CFR 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records.

**[40 CFR 60.7]**

### **B.3      Performance Tests**

(a) Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart unless the Administrator

(1) specifies or approves, in specific cases, the use of a reference method with minor changes in methodology,

(2) approves the use of an equivalent method,

(3) approves the use of an alternative method the results of which he has determined to be adequate for indicating whether a specific source is in compliance,

(4) waives the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the Administrator's satisfaction that the affected facility is in compliance with the standard, or

(5) approves shorter sampling times and smaller sample volumes when necessitated by process variables or other factors. Nothing in this paragraph shall be construed to abrogate the Administrator's authority to require testing under section 114 of the Act.

(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emissions limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emissions limit unless otherwise specified in the applicable standard.

(d) The owner or operator of an affected facility shall provide the Administrator at least 30 days prior notice of any performance test, except as specified under other subparts, to afford the Administrator the opportunity to have an observer present. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Administrator (or delegated State or local agency) as soon as possible of any delay in the original test date, either by providing at least seven days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator (or delegated State or local agency) by mutual agreement.

(e) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(1) Sampling ports adequate for test methods applicable to such facility. This includes (i) constructing the air pollution control system such that volumetric flow rates and pollutant emissions rates can be accurately determined by applicable test methods and procedures and (ii) providing a stack or duct free of cyclonic flow during performance tests, as demonstrated by applicable test methods and procedures.

(2) Safe sampling platform(s).

(3) Safe access to sampling platform(s).

(4) Utilities for sampling and testing equipment.

(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[40 CFR 60.8]

#### **B.4 Compliance with Standards and Maintenance Requirements**

(a) Compliance with standards in 40 CFR 60, other than opacity standards, shall be determined in accordance with performance tests established by § 60.8, unless otherwise specified in the applicable standard.

(b) Compliance with opacity standards in 40 CFR 60 shall be determined by conducting observations in accordance with Method 9 in Appendix A of 40 CFR 60, any alternative method that is approved by the Administrator, or as provided in paragraph (e)(5) of this section. For purposes of determining initial compliance, the minimum total time of observations shall be three hours (30 six-minute averages) for the performance test or other set of observations (meaning those fugitive-type emissions sources subject only to an opacity standard).

(c) The opacity standards set forth in 40 CFR 60 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

(d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(e)(1) For the purpose of demonstration initial compliance, opacity observations shall be conducted concurrently with the initial performance test required in § 60.8, unless one of the following conditions apply. If no performance test under § 60.8 is required, then opacity observations shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated but no later than 180 days after initial startup of the facility. If visibility or other conditions prevent the opacity observations from being conducted concurrently with the initial performance test required under § 60.8, the source owner or operator shall reschedule the opacity observations as soon after the initial performance test as possible, but not later than 30 days thereafter, and shall advise the Administrator of the rescheduled date. In these cases, the 30-day prior notification to the Administrator required in § 60.7(a)(6) shall be waived. The rescheduled opacity observations shall be conducted (to the extent possible) under the same operating conditions that existed during the initial performance test conducted under § 60.8. The visible emissions observer shall determine whether visibility or other conditions prevent the opacity observations from being made concurrently with the initial performance test in accordance with procedures contained in Method 9 of Appendix B of 40 CFR 60. Opacity readings of portions of plumes which contain condensed, uncombined water vapor shall not be used for purposes of determining compliance with opacity standards. The owner or operator of an affected facility shall make available, upon request by the Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emissions certification. Except as provided in paragraph (e)(5) of this section, the results of continuous monitoring by transmissometer which indicate that the opacity at the time visual observations were made was not in excess of the standard are probative but not conclusive evidence of the actual opacity of an emissions, provided that the source shall meet the burden of proving that the instrument used meets (at the time of the alleged violation) Performance Specification 1 in Appendix B of 40 CFR 60, has been properly maintained and (at the time of the alleged violation) that the resulting data have not been altered in any way.

(2) Except as provided in paragraph (e)(3) of this section, the owner or operator of an affected facility to which an opacity standard in 40 CFR 60 applies shall conduct opacity observations in accordance with paragraph (b) of this section, shall record the opacity of emissions, and shall report to the Administrator the opacity results along with the results of the initial performance test required under § 60.8. The inability of an owner or operator to secure a visible emissions observer shall not be considered a reason for not conducting the opacity observations concurrent with the initial performance test.

(3) The owner or operator of an affected facility to which an opacity standard in 40 CFR 60 applies may request the Administrator to determine and to record the opacity of emissions from the affected facility during the initial performance test and at such times as may be required. The owner or operator of the affected facility shall report the opacity results. Any request to the Administrator to determine and to record the opacity of emissions from an affected facility shall be included in the notification required in § 60.7(a)(6). If, for some reason, the Administrator cannot determine and record the opacity of emissions from the affected facility during the performance test, then the provisions of paragraph (e)(1) of this section shall apply.

(g) For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in 40 CFR 60, nothing in 40 CFR 60 shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

**[40 CFR 60.11]**

#### **B.5      Circumvention**

No owner or operator subject to the provisions of 40 CFR 60 shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emissions which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.

**[40 CFR 60.12]**

#### **B.6      Modification**

a) Except as provided under paragraphs (e) and (f) of this section, any physical or operational change to an existing facility which results in an increase in the emissions rate to the atmosphere of any pollutant to which a standard applies shall be considered a modification within the meaning of section 111 of the Act. Upon modification, an existing facility shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emissions rate to the atmosphere.

(b) Emission rate shall be expressed as kg/hr of any pollutant discharged into the atmosphere for which a standard is applicable. The Administrator shall use the following to determine emissions rate:

(1) Emission factors as specified in the latest issue of "Compilation of Air Pollutant Emission Factors," EPA Publication No. AP42, or other emissions factors determined by the Administrator to be superior to AP42 emissions factors, in cases where utilization of emissions factors demonstrates that the emissions level resulting from the physical or operational change will either clearly increase or clearly not increase.



(2) Material balances, continuous monitor data, or manual emissions tests in cases where utilization of emissions factors as referenced in paragraph (b)(1) of this section does not demonstrate to the Administrator's satisfaction whether the emissions level resulting from the physical or operational change will either clearly increase or clearly not increase, or where an owner or operator demonstrates to the Administrator's satisfaction that there are reasonable grounds to dispute the result obtained by the Administrator utilizing emissions factors as referenced in paragraph (b)(1) of this section. When the emissions rate is based on results from manual emissions tests or continuous monitoring systems, the procedures specified in Appendix C of 40 CFR 60 shall be used to determine whether an increase in emissions rate has occurred. Tests shall be conducted under such conditions as the Administrator shall specify to the owner or operator based on representative performance of the facility. At least three valid test runs must be conducted before and at least three after the physical or operational change. All operating parameters which may affect emissions must be held constant to the maximum feasible degree for all test runs.

(c) The addition of an affected facility to a stationary source as an expansion to that source or as a replacement for an existing facility shall not by itself bring within the applicability of 40 CFR 60 any other facility within that source.

(d) (Reserved).

(e) The following shall not, by themselves, be considered modifications under 40 CFR 60:

(1) Maintenance, repair, and replacement which the Administrator determines to be routine for a source category, subject to the provisions of paragraph (c) of this section and § 60.15.

(2) An increase in production rate of an existing facility, if that increase can be accomplished without a capital expenditure on that facility.

(3) An increase in the hours of operation.

(4) Use of an alternative fuel or raw material if, prior to the date any standard under 40 CFR 60 becomes applicable to that source type, as provided by § 60.1, the existing facility was designed to accommodate that alternative use. A facility shall be considered to be designed to accommodate an alternative fuel or raw material if that use could be accomplished under the facility's construction specifications as amended prior to the change. Conversion to coal required for energy considerations, as specified in section 111(a)(8) of the Act, shall not be considered a modification.

(5) The addition or use of any system or device whose primary function is the reduction of air pollutants, except when an emissions control system is removed or is replaced by a system which the Administrator determines to be less environmentally beneficial.

(6) The relocation or change in ownership of an existing facility.

(f) Special provisions set forth under an applicable subpart of 40 CFR 60 shall supersede any conflicting provisions of this section.

(g) Within 180 days of the completion of any physical or operational change subject to the control measures specified in paragraph (a) of this section, compliance with all applicable standards must be achieved.

**[40 CFR 60.14]**

## **Appendix C**

### **PM Compliance Demonstration Plan**

**Inkom Continuous Compliance Assurance Monitoring System for  
ELECTROSTATIC PRECIPITATOR (ESP) PM CONTROL**

**I. Background**

**A. Emissions Unit**

Description: Wet Process Portland Cement Kilns  
Identification: Kiln No. 1 and Kiln No. 2  
APCD ID: ESP No.1 and ESP No. 2  
Facility: Ash Grove Cement Company  
Inkom Idaho

**B. Applicable Regulation, Emissions Limit, and Monitoring Requirements**

Regulation: Tier II Permit, State regulation  
Emissions Limits: (PM) 0.3 pounds per ton of dry kiln feed  
Current Monitoring Requirements: Daily ESP power

Proposed Monitoring Requirements: Continuous ESP total power in kilovolt-amperes (kVA) (hourly average) and continuous opacity monitoring (hourly average)

**C. Control Technology**

Description: Electrostatic precipitator

**II. Monitoring Approach**

Ash Grove Cement Company (Ash Grove) is proposing to install a continuous compliance assurance monitoring system for the No. 1 and No. 2 kiln ESPs at the Inkom Idaho plant. The Inkom kilns rely on these ESPs to achieve compliance with the kiln particulate matter permit limits. This compliance assurance monitoring system is intended to provide a reasonable assurance that the control equipment is operating properly. So long as the ESPs are operating properly, the source has reasonable assurance that the kilns are in continuous compliance with the particulate limit. The monitored indicator parameters will be stack opacity and total kVA power applied to the electrostatic precipitators. The plant will develop indicator

values for these parameters using the procedures described in this document. If an excursion occurs (the monitored values exceed (for opacity) or drop below (power input) the established indicator values), an inspection with corrective action activities will be promptly initiated. The occurrence of an excursion does not necessarily mean that an exceedance of the underlying standard has occurred. If appropriate corrective action does not return the indicator parameters to acceptable ranges within 48 hours, all reasonable efforts will taken to remedy the malfunction as expeditiously as possible. If the malfunction cannot be corrected and the indicator parameters returned to acceptable ranges, the facility will schedule a Method 5 test as soon as practicable to demonstrate compliance with the particulate limits and/or to establish new values for the indicator parameters. The plant will monitor and record the sum of the electrical power input (kVA) over the three fields of the ESP. Each clock hour, the data acquisition and handling system will record the arithmetic mean of the values collected during that hour. The plant will also install, operate, and maintain a continuous opacity monitor (COM) meeting 40 CFR Part 60, Appendix B, Performance Specification 1 criteria. Every clock minute, the data acquisition and handling system will record the arithmetic mean of the values collected during that minute.

Ash Grove will conduct Method 5 PM testing to establish suitable maximum opacity and minimum power indicator values for each kiln stack and ESP. This test will establish the levels for the combined factors of opacity and total kVA that can be used as an indicator of optimal ESP operation and in the event of a change in performance, trigger corrective action to return the ESP to optimum operating conditions and control efficiency. In summation, this monitoring proposal will result in a continuous means of tracking ESP performance and triggering corrective actions. The details of this approach are outlined in Table 1.

TABLE 1. MONITORING APPROACH

I. Indicator	ESP Power: Average hourly electrical power (kVA) to each ESP.
II. Measurement Approach	Opacity: Hourly block average opacity. Each stack will monitor opacity using a CG meeting the current PS1 specifications.  The electrical power input is measured using a voltmeter and an ammeter. The total power (P) input to the ESP is the sum of the products of the secondary voltage (V) and current (I) in each field. ( $P = V_1I_1 + V_2I_2 + V_3I_3$ ). The one-minute total power values collected will be summed and averaged hourly. Opacity is measured using a COM certified using the procedures codified in 40 CFR 60. The one-minute values collected will be summed and averaged hourly.
III. Indicator Value	Because of the nature of the ESP, an indicator upper end value will be established for opacity and a lower end value for power input. An excursion occurs if opacity exceeds that indicator value or power input drops below its respective hourly average indicator value (i.e., a total ESP power input less than the lowest average kVA). These indicator values will be established during a source test. Excursions trigger an inspection, corrective action, and a reporting requirement. If appropriate corrective action does not expeditiously return the indicator parameter to within the indicator values established during the PM testing within 48 hours, all reasonable efforts will be taken to remedy the malfunction as expeditious as possible.
IV. Performance Criteria	The voltage and current are measured using the instrumentation specifically designed and installed on each ESP to measure and control the performance of the ESP.
A. Data Representativeness	The opacity monitor will be a Monitor Labs Inc. Model 560C microprocessor, light emitting diode based COMB designed to conform to all applicable requirements in 40 CFR 60.7, 60.13, Appendix B, PS-1 and ASTM 6216-98.
B. Verification of Operational Status	Opacity: Daily check procedure kVA: Continuous monitoring
C. QA/QC Practices and Criteria	Opacity: Conform to QA/QC criteria specified in 40 CFR 60, App. B, PS-1. kVA: Validate voltage controller output on an annual basis in accordance with good engineering practice.
D. Monitoring Frequency	Opacity: The COM will measure the opacity on a 10-second or basis. In addition, the COM will calculate a one-minute block opacity value based on the available 10-second values. The plant will calculate a one-hour block arithmetic mean opacity value based on the available values. The plant will record at least ninety-five percent of all one minute values.  kVA: The secondary voltage monitor and current monitor will measure their respective values on a fifteen second or less basis. The plant will calculate a one-hour block kV, arithmetic mean value based on the available values. The plant will record at least ninety-five percent of the one-hour values.
E. Data Collection Procedures	Opacity: Record one-minute block average kVA: Record one-hour block average
F. Averaging period	Opacity: One-hour block average kVA: One-hour block average.

Performance Testing	<p>After conducting the initial performance test to establish the indicator parameter values, Ash Grove will perform a 40 CFR Part 60 Appendix A Method 5 test once each calendar year to verify compliance with the kiln particulate matter emissions standards set out in the air permit.</p> <p>If the results of the three consecutive years of annual Method 5 tests are determined to be less than or equal to 75 percent of the applicable emission limit, Ashgrove may apply to the Department to have the frequency of the testing reduced to once every 30 months and the verification test will be conducted in coordination with the required 30 month NESHAP performance testing. The Department reserves the right to continue requiring annual Method 5 testing for PM emissions under this plan. If the frequency of Method 5 testing is reduced pursuant hereto, and if the results of the 30-month Method 5 test exceed 75 percent of the applicable emission limit, annual testing will be resumed until such time that the Ashgrove demonstrates three consecutive years of Method 5 test results that are less than 75 percent of the applicable standard when 30 month testing will be resumed.</p>
H. Other Periodic Monitoring	<p>Monthly 1-minute visible emission observations of each electrostatic precipitator structure shall be performed in accordance with 40 CFR Part 60 Appendix A Method 22. If visible emissions are observed, Ash Grove will initiate corrective action under the CAM Plan.</p>

### III. MONITORING APPROACH JUSTIFICATION

#### A. Background

The pollutant-specific emissions units are two wet process portland cement kilns controlled by two ESPs containing three fields each. Kilns 1 and 2 are permitted to produce 15.4 and 19.4 tons per hour clinker respectively on an annual average basis. Both kilns are permitted to burn coal, tires, natural gas and used oil. This CAM Plan is designed to explain the basis for the continuous monitoring methodology proposed by the facility to assure that the ESPs maintain optimum operation conditions and control efficiency.

#### B. Project Description

Ash Grove in Inkom, Idaho has upgraded its ESP controllers on Kiln No. 1, and has installed COMs on the Kilns No. 1 & Kiln No. 2 that comply with the recently revised PS-1 criteria. These projects have not changed the fundamental particulate removal technology utilized by the ESPs, however, the ability of the plant to monitor and control ESP performance has increased. The scope of the Kiln No. 1 ESP controller upgrade includes automated control of the power and rapping design. Based on the results of this approach from testing these controls on Kiln No. 1, a similar upgrade is planned for Kiln No. 2. The new equipment will improve performance of the existing ESPs and provide Ash Grove with a means of continuously monitoring their relative performance.

The establishment of the CAM indicator levels will involve at least three Method 5 emissions test runs at low ESP power levels while continuously monitoring opacity. Total ESP power input kVA will be monitored at least every 15 seconds to create a one-minute kVA averages. Continuous opacity monitoring data will be monitored at least every 10 seconds to create a one-minute averages. The indicator values and will equal the lowest (kVA) or highest (opacity) average of the one minute values recorded during a source test run that resulted in emissions less than 0.3 pounds per ton of dry feed. These parameters are selected because they are sensitive indicators of PM emissions. Additional features of the monitoring proposal include the following:

Enhanced utilization of existing monitoring equipment to trigger corrective action response.

Immediate implementation without the lengthy research and development program necessary to install other experimental indicators (e.g., PM CEMS). EPA studies using PM CEMS have been unable to demonstrate the precision required to meet the performance specifications for compliance monitoring on cement kilns.

The following information is presented to demonstrate the specific changes of the existing and the proposed monitoring approach.

**TABLE 2. APPROACH COMPARISON SUMMARY**

Monitors	Existing Monitoring Program	Proposed Monitoring Program
Opacity	No COM	COM
Total kVA	Daily Record keeping	Hourly Record keeping
Corrective Action Triggers	20% opacity	A level to be established by testing for opacity  A level to be established by testing for total kVA

**C. Rationale for selection of total power input as a performance indicator**

In an ESP, electric fields are established by applying a direct-current voltage across a pair of electrodes, a discharge electrode and a collection electrode. Particulate

matter suspended in the gas stream is electrically charged by passing through the electric field around each discharge electrode (the negatively charged electrode). The negatively charged particles then migrate toward the positively charged collection electrodes. The particulate matter is separated from the gas stream by retention on the collection electrode. Particulate is removed from the collection plates by shaking or rapping the plates. As a general rule, ESP performance improves as total power input increases. This relationship is true when particulate matter and gas stream properties (such as PM concentration, size distribution, resistivity, and gas flow rate) remain stable and all equipment components (such as rappers, plates, wires, hoppers, and transformer-rectifiers) operate satisfactorily.

The secondary voltage drops when a malfunction, such as grounded electrodes, occurs in the ESP. When the secondary voltage drops, less particulate is charged and collected. Also, the secondary voltage can remain high but fail to perform its function if the collection plates are not cleaned, or rapped, appropriately. If the collection plates are not cleaned the current drops.

Thus, since the power is the product of the voltage and the current, monitoring the total ESP power input will provide a reasonable assurance that the ESP is functioning properly.

#### **D. Rationale for selection of total power as an Indicator Range**

The total power input to the ESP is the sum of the products of the secondary voltage and secondary current for each field. An excursion is defined as an hourly average ESP power input less than the established indicator value. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions and corrective action will be documented and reported. The total ESP input power level indicator value will be determined during a Method 5 performance test consisting of at least three runs and will equal the lowest average power input measurement during a source test run that resulted in emissions less than 0.3 pounds per ton of dry feed.

#### **E. Rationale for using opacity as a second indicator parameter**

Five analytical principles have been used in instruments to measure PM concentrations. These principles are light scattering, beta attenuation, probe electrification, light



extinction, and optical scintillation. An opacity monitor uses light extinction.

"Light extinction is a common method in use today; the instruments that incorporate this technology are referred to as transmissometers or opacity monitors. These instruments measure the loss of light intensity across a particulate laden gas stream as a function of Beer-Lambert's Law. The intensity of the light at the detector,  $I$ , is compared with the reference light intensity,  $I_0$ , to give the transmittance,  $T = I/I_0$ . Transmittance can be converted to opacity,  $Op = 1 - T$ , or optical density,  $D = \log(1/T)$ . The loss of light intensity can be correlated to particulate mass concentration measured by manual gravimetric sampling."<sup>1</sup> Although the precision of this correlation is short-lived, its relative variance represents a measure of increasing or decreasing PM concentration, that when used in conjunction with kVA is a sensitive indicator of system change.

The light is modulated from the measuring head and projected through the measuring path in the stack to the opposing reflector, which then makes the beam traverse the measuring path a second time. The attenuation of the measuring beam light energy, caused by the dust particles, is proportional to the particle density. An excursion is defined as a one-hour block average opacity greater than the maximum average opacity recorded during any Method 5 performance test run during any test run that resulted in emissions less than 0.3 pounds per ton of dry feed. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported.

#### IV. Stack Test

After Agency approval, Ash Grove will schedule the performance testing that is described in the approved stack test plan. Until testing is performed, Ash Grove proposes to continue operation in compliance with the existing corrective action program. Based on the results of the proposed ESP performance testing, Ash Grove will establish new corrective action triggers with opacity and total kVA.

The testing to be performed will be described in detail in a stack-testing plan, which will be submitted to the IDEQ for approval. The plan will contain information under the following headings:

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<sup>1</sup> Midwest Research Institute Current Knowledge of Particulate Matter (PM) Continuous Emissions monitoring; U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards; Research Triangle Park, North Carolina, Sept. 2002; EPA-464/P-00-009

General description of the cement-manufacturing process;  
Engineering description of the kiln systems at the Inkom plant;  
Air pollution control equipment operation;  
Sampling, analysis, and monitoring procedures;  
Test schedule;  
Test protocols;  
Shutdown procedures; and  
Post-testing operations.

Once the stack test report is complete, Ash Grove will submit to IDEQ a certification notifying the Department as to the results of the stack test and the kVA and opacity trigger determinations. Using all relevant data from the performance test, the resulting kVA and opacity levels will be used to calculate corrective action triggers.

#### **V. Corrective Action**

Corrective action must be initiated as soon as reasonably practicable after either the one-hour average opacity value exceeds the established opacity indicator value or the one-hour average kVA drops below the established power indicator value. Corrective action should be completed within a reasonable time after its initiation. Corrective action will be documented through the plant work order system. If appropriate corrective action does not expeditiously return the indicator parameter to within the range established during the PM testing, the plant will as soon as practicable conduct Method 5 testing to demonstrate compliance with the standard and to establish new opacity and kVA values.

**Appendix D**  
**Water Spray Log**

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## **Appendix E**

### **Dust Collector Maintenance Plan**

**ASH GROVE CEMENT COMPANY**

**INKOM, IDAHO PLANT**

**DUST COLLECTOR  
MAINTENANCE PLAN**

**Dust Collector's  
BH1, BH2, BH3, BH4, BH5, BH6, BH9, BH10, and BH11**

**January 29, 2002**

## **DUST COLLECTION MAINTENANCE PLAN**

### **ASH GROVE CEMENT, INKOM, IDAHO PLANT**

#### **PURPOSE**

This program is designed to document current and on going dust collection equipment maintenance at the Inkom plant. The program is broken into six sections as follows:

1. Daily shift inspections by production personnel.
2. Daily routine scheduled inspections by a baghouse specialist.
3. Monthly scheduled inspections by a baghouse specialist.
4. Annual scheduled inspections by a baghouse specialist.
5. Documentation of program activities.
6. QA/QC Activities.

#### **SECTION 1: DAILY SHIFT INSPECTIONS BY PRODUCTION PERSONNEL**

Production utility personnel tour the plant twice per shift. During each tour of the plant, utility personnel observe each exhaust duct from each dust collector for visible emissions. If any visible emissions are noted from any particular dust collector, the dust collector is removed from service and the appropriate repair actions are taken. Usually, the entire system in which the dust collector is included must be shut down. When bag problems are identified, bags are either replaced or otherwise isolated. Corrective actions are documented on a bag replacement form (Appendix D) that is maintained in the planner's office for the purpose of tracking bag and dust collector performance. Time spent repairing a given dust collector is noted on the appropriate employee's time sheet via work order. This enables maintenance personnel to monitor and track maintenance activities on each dust collector.

#### **SECTION 2: DAILY SCHEDULED INSPECTIONS BY THE BAGHOUSE SPECIALIST**

On a daily basis, the baghouse specialist performs a detailed inspection and mechanical walkthrough of each dust collector. Method 22- like observations of each exhaust port and transfer point serviced by the dust collector is performed during the walkthrough. If this test results in any visible emissions, a person certified in visible emissions monitoring evaluates the emissions by performing a Method 9 test. When necessary, the maintenance department shall be notified to perform any maintenance work on the baghouse. Other items checked during this daily inspection include the magnehelic gauges (if applicable), overall visual inspection of the dust collector, hopper level indicators, manifold pressures, and door seals. The baghouse specialist is

responsible for maintaining a daily log of problem areas noted during the walkthrough inspection. The log is maintained in the planner's office. In addition to these duties, the baghouse specialist records the pressure drop across each dust collector once a week. If the dust collector is down on the day of the reading, the baghouse specialist will record the pressure drop on the next day that the unit is operating. Since each dust collector's pressure drop can be affected by process-specific variables, the manufacturer's recommended operating range may not be indicative of the dust collector's performance. The list below shows the recommended pressure drop ranges based on actual Method 22 evaluations of the dust collectors under their existing process operating conditions. A further discussion of the methodology used to determine the ranges can be found in Appendix A. It should be noted that these are recommended operating ranges for the dust collectors and are considered only one of many ways to monitor dust collector performance. Pressure drop across a dust collector is one indication of the collector's operation but gives no indication of the collector's emissions. Since these differential pressure operating ranges are only recommended ranges, Ash Grove acknowledges that they cannot always be met and makes no claim that they will be met on a continuous basis. Differential pressure can increase or decrease for a number of dust collector specific and / or process related reasons such as loss of system airflow to the collector or loss of airflow to the cleaning devices.

#### Ash Grove's Dust Collector Pressure Drop Ranges

BH1 2.8" – 8.2"

BH2 1.0" – 5.0"

BH3 3.0" – 6.0"

BH4 3.0" – 8.0"

BH5 Not In Service

BH6 1.0" – 6.4"

BH7 2.4" – 6.0"

BH8 3.0" – 7.4"

BH9 3.0" – 7.4"

BH10 2.8" – 5.0"

BH11 1.8" – 7.0"



### **SECTION 3: MONTHLY SCHEDULED INSPECTIONS BY THE BAGHOUSE SPECIALIST**

Using the Maintenance Management System, the Maintenance Planner schedules a monthly work order to perform a formal inspection of all dust collectors. This monthly inspection usually occurs while the dust collector is in service and does not typically require the system being controlled by the dust collector to be taken out of service. Included in this inspection is a check of the pulse air system and controls for proper operation, air receiver tank(s), pulse air diaphragm(s), fan(s), drive(s), airlock(s), exterior condition (holes), door seal(s), partition wall(s), and duct(s). The checklist is attached as Appendix B. If, during the inspection, the baghouse specialist notes additional problems, the Maintenance Planner generates a work order to document these problems. Usually the repairs are mechanical in nature, but at times electrical repairs are also required. Both mechanical and electrical repairs are completed as soon as possible, but may need to be scheduled for later dates because of the complex nature of the job or the availability of spare parts.

The Maintenance department does the monthly inspection and the records are filed in the Maintenance Planner's Office, as well as documented in the Maintenance Management System.

### **SECTION 4: ANNUAL SCHEDULED INSPECTIONS BY THE BAGHOUSE SPECIALIST**

Annual inspection schedules are maintained by the Maintenance Management System and administered by the Maintenance Planner. These annual inspections occur on a staggered frequency throughout the year and occur at times when the dust collector or particular system served by that dust collector is removed from service. In no case will a dust collector not be inspected annually. In addition to the items inspected during the scheduled monthly inspections, the more comprehensive annual inspection includes a detailed examination of the internal components of the dust collector. Typically, this inspection is performed concurrent with system maintenance tasks. Inspections are documented and maintained in the same manner as the monthly inspections. Please see Appendix C for an example of the annual inspection checklist.

Ash Grove reserves the right to change the frequencies of the scheduled maintenance depending upon production schedules and the wear rates of the consumable parts in each dust collector.

### **SECTION 5: DOCUMENTATION OF PROGRAM ACTIVITIES**

#### **MAINTENANCE PLANNER'S RECORD KEEPING RESPONSIBILITIES:**

The Maintenance Planner maintains all records of dust collector bag changes, both on a scheduled and emergency basis, in the Maintenance Management System. The bag replacement form shown in Appendix D is used for this purpose.

The Production and Maintenance Supervisor's will also be certain that all labor spent working on the dust collection equipment is noted on the employees' daily time slips, so that these hours can be tallied in the plant's maintenance/payroll computer system. The Maintenance Planner will also monitor the proper charge out of stores inventory in order to maintain an accurate accounting of all materials used on this equipment.

The records of generated work orders concerning the plant's dust collection equipment, work done during the routine and annual inspections, and all other work requests on the plant's dust collection equipment, will be maintained by the Maintenance Planner. The Maintenance Planner will maintain a file of work performed during monthly scheduled dust collector inspections. The work order system will also be updated as to work performed during the monthly scheduled dust collector inspections. The Maintenance Planner will also file all other dust collection work order documentation generated during the annual equipment inspections.

The Electrical Supervisor will be certain that all electrical labor hours spent on the dust collection equipment are documented on the electric shop employees' time slips, so that proper accounting of the time and labor costs can be accomplished. The Electrical Supervisor will monitor the proper charge out of stores inventory in order to maintain an accurate accounting of all materials used on this equipment.

The Maintenance Planner will maintain the scheduled inspection documentation. He/she will keep the checklists shown in Appendix B & C to use when inspecting the dust collection equipment. All documentation of mechanical and electrical work orders made will be maintained in the Maintenance Management System.

#### **SECTION 6: QA/QC ACTIVITIES**

The Environmental and Safety Manager, or his designee, will administer QA/QC activities for this program. The Environmental and Safety Manager, or his designee, will audit the inspection records identified in Sections 1 through 5 of this plan to ensure that all records of all inspections are properly completed and maintained, and that repairs are carried to completion in a timely manner that helps ensure compliance with the applicable requirements.

In addition, documentation will be maintained that an individual qualified in Method 22-like emission observation trains the Baghouse Specialist and other personnel responsible for the daily and periodic inspections.

#### **CONCLUSION**

With this program, Ash Grove is able to track the repair history of each dust collector and provide accurate accounting for all costs associated with maintaining the equipment in a manner consistent with compliance requirements and good engineering practice to minimize emissions. This program has built into it the capability of identifying recurring repair patterns that could indicate inadequate design, operation, or maintenance of its dust collectors.

This program may be modified to accommodate the commissioning or decommissioning of equipment, the replacement or modification of the Maintenance Management System used by the Maintenance Planner, or in the event that the plant work order computer system is changed. Modifications of the type mentioned above are administrative in nature and will not change the basic operation of the maintenance system and the corresponding monitoring and record keeping of dust collector inspections.

## **Appendix F**

### **Weekly Fugitive Emissions Inspection List**

### Appendix F, Weekly Fugitive Emission Inspection List

Permit Table	Source Codes to be inspected
3.1	Inclusive
4.1	Inclusive
5.1	F4, F5, F6
6.1	Inclusive
7.1	Inclusive
8.1	Inclusive
9.1	Inclusive
10.1	Inclusive
11.1	F43, F44, F47, F48
12.1	None
13.1	Inclusive
14.1	Inclusive
15.1	Inclusive
16.1	F88, F96, F97, F98-F107, F109
17.1	Inclusive
18.1	Inclusive

## **Appendix G**

### **Weekly Visible Emissions Inspection List**

### Appendix G, Weekly Visible Emission Inspection List

Permit Table	Source Codes to be inspected
3.1	None
4.1	None
5.1	F7-F17, inclusive
6.1	None
7.1	None
8.1	None
9.1	None
10.1	Monthly 1-minute Method 22 observation of electrostatic precipitator structure, see Appendix C – PM Compliance Demonstration Plan
11.1	F45, F49, F50, F51, F52, F56, F57, F58, F59, F60, F62, F63, F64, F65, F65a
12.1	F66-F81
13.1	None
14.1	None
15.1	None
16.1	F82, F83, F84, F85, F87, F92, F93, F94, F95, F108
17.1	None
18.1	None
	Baghouses (1, 2, 3, 4, 6, 7, 8, 9, 10, 11) – Monitor in accordance with Dust Collector Maintenance Plan